



STATE OF WASHINGTON

DEPARTMENT OF ENTERPRISE SERVICES
ON-CALL BUILDING ENVELOPE & ROOFING
CONSULTANT SERVICES
PROJECT NO. 2021-811



NEXUS bec, Inc.
747 Fawcett Ave, Suite C | Tacoma, WA 98402
(253) 625-7090

[NEXUSbec.com](https://www.NEXUSbec.com)



747 Fawcett Ave, Suite C
Tacoma, WA 98402
(253) 625-7090 Office

March 25, 2021

David Hruska, Project Manager
State of Washington
Department of Enterprise Services
1500 Jefferson
Olympia, WA 98504

Re: On-call Building Envelope and Roofing Consultant Services Contract No. 2021-811

Dear Mr. Hruska and the DES Selection Committee,

We are pleased to present our qualifications for your review and consideration for the professional Building Enclosure Consultant needs on the On-call Building Envelope and Roofing Consultant Services Contract.

NEXUS has performed design and consulting services on facilities from around the country, but our home is in the Pacific Northwest. We take an integrated approach to look at the underlying project goals and relationships between the outdoor environment, materials, and systems that meets the need for building functionality.

With licensed architects, engineers, and integrated field inspectors on staff, we are experienced with both the design and direct implementation of details. This level of experience gives you a significant advantage. We pride ourselves in solving problems others cannot and doing so cost-effectively with an eye toward long-term functionality.

Why choose NEXUS:

1. Department of Enterprise Services Experience - Detailed in our submittal, the NEXUS team has extensive experience working on a variety of State projects.
2. Full Service Capabilities - We are able to provide a variety of services including Building Enclosure Design, Testing, and Building Enclosure Commissioning.
3. No Limits - We can solve the problems other teams cannot. We apply our experience and learning from the field to the functional and practical needs of every design project.

Few firms investigate, evaluate, test, and design - we do that and more. Utilize our comprehensive experience to develop smart solutions for this facility needs to ensure years of extended life, quality of structure, and enhance the integration of your building enclosure components. We invite you to engage our building enclosure and roofing specialists today to provide you with cost effective, creative solutions to your building envelope needs.

Sincerely,

A handwritten signature in black ink, appearing to read "Todd J. Wolf", written over a white background.

Todd Wolf, Principal
NEXUS bec, Inc



STATE OF WASHINGTON
DEPARTMENT OF ENTERPRISE SERVICES

*1500 Jefferson St. SE, Olympia, WA 98501
PO Box 41476, Olympia, WA 98504-1476*

Designated Point of Contact for Statement of Qualifications

Point of Contact Name and Title	Todd Wolf, Managing Principal		
Firm Name	NEXUS bec, Inc.		
Address	747 Fawcett Ave, Suite C		
City	Tacoma	State	WA
		Zip	98402
Telephone	(253) 625-7090	Email	twolf@nexusbec.com

Addresses of multiple office locations of firm (if applicable)

Address	
City	Phone
Address	
City	Phone
Address	
City	Phone
Address	
City	Phone

Diverse Business Certifications (if applicable)

Certification issued by the Washington State Office of Minority and Women's Business Enterprise (OMWBE)

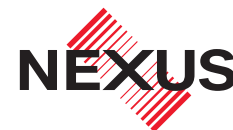
- ☐ Minority Business Enterprise (MBE)
- ☐ Woman Business Enterprise (WBE)
- ☐ Minority Women Business Enterprise (MWBE)


Certification issued through the Washington State Department of Veteran's Affairs

- ☐ Veteran Owned Business

Certification issued through Washington Electronic Business Solution (WEBS)

- ☒ Small Business Enterprise (SBE)



ARCHITECT-ENGINEER QUALIFICATIONS					1. SOLICITATION NUMBER (IF ANY) 2021-811	
PART II - GENERAL QUALIFICATIONS (If a firm has branch offices, complete for each specific branch seeking work)						
2a. FIRM (OR BRANCH OFFICE) NAME NEXUS bec, Inc.				3. YEAR ESTABLISHED 2016	4. DUNS NUMBER 080130202	
2b. STREET 747 Fawcett Ave., Suite C				5. OWNERSHIP		
2c. CITY Tacoma		2d. STATE Washington		2e. ZIP CODE 98402		a. TYPE Sub - S Corporation
6a. POINT OF CONTACT NAME AND TITLE Todd Wolf, Principal				b. SMALL BUSINESS STATUS SBA Small Business		
6b. TELEPHONE NUMBER (253) 625-7090		6c. EMAIL ADDRESS twolf@nexusbec.com		7. NAME OF FIRM (IF BLOCK 2A IS A BRANCH OFFICE)		
8A. FORMER FIRM NAMES (IF ANY) BCRA, Inc. (As the BCRA Building Science group for 10+ years.)				8B. YR ESTABLISHED 1989	8C. DUNS NUMBER 800375214	
9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR THE LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number
		(1) FIRM	(2) BRANCH			
01	Architect	1		202	ADA Consulting	1
47	CADD Drafting	1		212	Building Condition Assessment	1
14	Roofing/Envelope Consultant	5		017	Commercial Buildings	2
				113	Construction Testing and Inspection	2
				015	Daycare Facilities	1
				027	Dining Halls, Clubs, Restaurants	1
				029	Educational Facilities, Classrooms	4
				217	Envelope Waterproofing (Above Ground)	2
				218	Envelope Waterproofing (Below Ground)	2
				039	Garages; Vehicle Maintenance Facilities; Parking Decks	1
				030	Gyms; Stadiums, Field Houses	4
				048	Hospital and Medical Facilities	3
				050	Housing/Group Homes	4
				058	Laboratories; Medical Research Facilities	1
				060	Libraries	1
				069	Modular/Pre-Fab Design, Temporary Structures	1
				072	Office Buildings	2
				084	Prisons & Correctional Facilities	1
				089	Rehabilitation (Buildings; Structures; Facilities)	1
				201	Roofing; design and inspection	2
				087	Swimming Pools	3
	Other Employees	2				
Total		9				
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR THE LAST 3 YEARS				PROFESSIONAL SERVICES REVENUE INDEX NUMBER		
a. Federal Work		3		1. Less than \$100,000	6. \$2 million to less than \$5M	
b. Non-federal Work		4		2. \$100,000 to less than \$250k	7. \$5 million to less than \$10M	
c. Total Work		5		3. \$250,000 to less than \$500K	8. \$10 million to less than \$25M	
				4. \$500,000 to less than \$1M	9. \$25 million to less than \$50M	
				5. \$1 million to less than \$2M	10. \$50 million or greater	
12. AUTHORIZED REPRESENTATIVE						
The foregoing is a statement of facts.						
a. SIGNATURE 				b. DATE 03/25/2021		
c. NAME AND TITLE Todd Wolf, NEXUS bec Principal						



Investigators Born from Architects

Seems a little odd, doesn't it? We're not kidding, it's true. We have licensed Architects, Principals, and Project Managers approaching 100 years of combined experience. After seeing failures between plans and construction delivery, NEXUS was compelled to evolve from asking the questions to uncovering the crux and delivering the solution.



Industry Pioneer

Our founder Ken Rowan assisted the US Army Corps of Engineers in writing the AIR LEAKAGE TEST PROTOCOL for MEASURING AIR LEAKAGE in BUILDINGS, 2008 and 2012 editions.



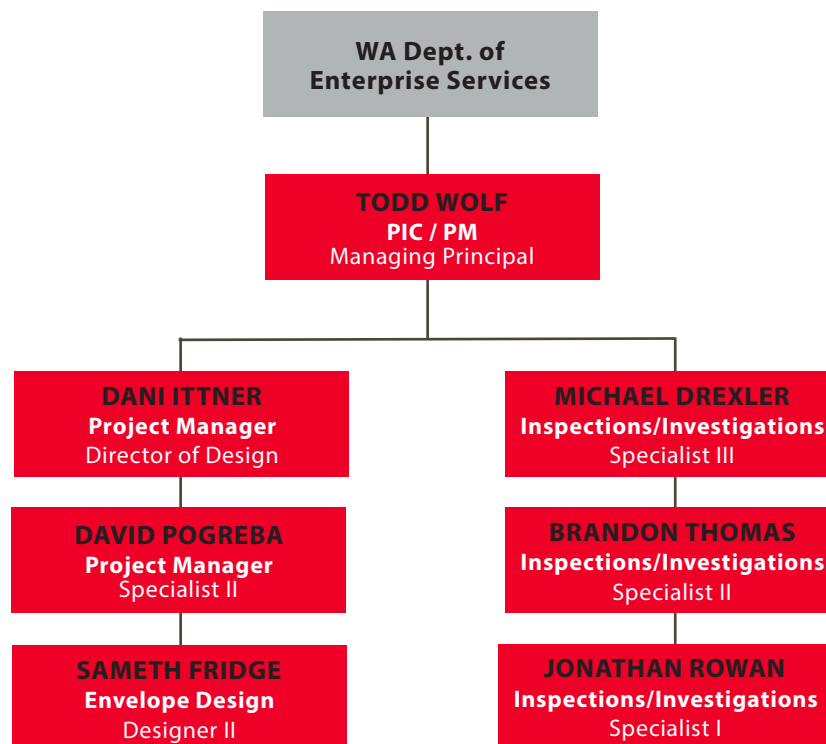
Experts Since 2004

NEXUS is a growing team of hands-on thought leaders changing the building science landscape. NEXUS leadership has provided training to Naval Facilities Command and the US Army Corps of Engineers.

Qualifications of Key Personnel

TEAM ORGANIZATION

Given the potential for overlapping on-call projects, we propose a team of hands-on project managers and technicians. This responsive team allows NEXUS to delegate projects according to the individual talents and skills of our team members. Unlike traditional Project Managers, ours spend as much time in the field as they do behind a desk. We are a proactive team, excited to roll up our sleeves everyday to determine the source of facility failures and devise the proper corrective course.



NEXUS offers a unique collection of services not commonly found in any many building science firms. We firmly believe that our capabilities most closely align with the types of design/maintenance needs of the State for exterior building elements and we have extensive experience working with the State on roof replacements, facility conditions assessments, building forensic and water intrusion investigations.

Our focus at NEXUS is in providing investigations and testing of the building envelope, including the roof, exterior walls, windows/doors, weather barriers, thermal barriers, structural elements and sub-grade conditions/waterproofing. This focus is unique to the architectural community and NEXUS frequently consults with other architects providing air barrier/waterproofing detailing and design support for the entire exterior elements of the building.

Qualifications of Key Personnel

EXPERIENCE & RESPONSIBILITIES



Counties we've worked in

Counties on our bucket list



TODD WOLF (BECxP, CxA+P, ITC-II, BCA), TWIC Holder

Project Role: Principal-in-Charge & Project Manager

NEXUS Title: Managing Principal

As Principal-in-Charge, Todd will be the main point-of-contact for the on-call project distribution. He will also provide Project Management for select projects. Todd has 22 years of project management, design, and field testing experience. He will guide all phases of design development and manage the design disciplines and sub-consultants throughout project delivery. Todd will also maintain the project budget and schedules.

Renton Technical College Air Barrier Testing

Central Washington University Air Barrier Testing

South Puget Sound Community College Building 22 Roof Replacement

Centralia College Multi-Building Roof and Water Intrusion Assessment

City of Tacoma

2308 Holgate Building Roof Collapse Assessment and Replacement

2311 Holgate Building Roof

Port of Tacoma

On-Call Services (2009-2011)

Taylor Way Facilities Condition Assessment and Roof Replacement

401 Alexander Roof Replacement

Fabulich Center Building Assessment



DANI ITTNER (NCARB, BIM, WUFI, THERM)

Project Role: Project Manager

NEXUS Title: Director of Design

Dani has over 19 years of experience as an architect with the last 14 years focused on building enclosure and energy code analysis/code compliance. She currently leads all energy and hygrothermal modeling efforts for NEXUS and is also the Director of BIM/CAD at NEXUS. Her expertise in architectural design, particularly in building envelope design/detailing, for existing building envelope systems and roofing assembly conditions will be an important capability in addressing the needs at State facilities.

KCHA On-Call

Ballinger Homes Envelope Design

Woodcreek Lane Envelope & Roof Design

Youngs Lake Envelope Design

WSDOT On-Call

Chehalis Floor Moisture Study

Corson Avenue Materials Laboratory Moisture Room Investigation

State Materials Lab Roof Replacement

WSDOT On-Call cont.

Olympic Region HQ Building 6 Roof Assessment & Replacement

SeaTac Rest Area Improvements

Aberdeen Occupancy Analysis/ Northup Pre-Design

Qualifications of Key Personnel

EXPERIENCE & RESPONSIBILITIES



MICHAEL DREXLER (ITC-II, CEI, ABAA AUDITOR, FAA CERTIFIED sUAS PILOT)

Project Role: Inspections/Investigations NEXUS Title: Building Envelope Specialist III

Michael's technical expertise has been shaped by his ground-up building envelope background and natural ability to fully grasp concepts quickly. He has nine years of experience in the building science industry, including extensive experience in building forensic investigations, construction inspections and roof evaluations. Michael is unique in that he has worked as a building envelope consultant, contractor, and roofing manufacturer technical representative.

Pierce College Cascade Building

Bates College Medical Health Center

*Highline College Building 26
Envelope Testing*

*L&I/WSDA Safety & Health Lab and
Training Center*

South Puget Sound Bldg 22 Repairs

*Centralia College Multi-Building Roof
and Water Intrusion Assessment*

*Capital High School Roof Assessment
and Inspections*

Salt Lake City DA Office

*Salt Lake City West Jordan Office
Building*

*Renton Technical College Air Barrier
Testing*

VA Hospital, Roseburg

*Seattle Gateway Center #1 & #2
Envelope Testing*

Kent YMCA

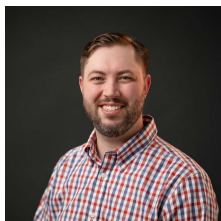


SAMETH FRIDGE

Project Role: Envelope Design

NEXUS Title: Building Envelope Designer II

Sameth brings more than 15 years experience providing architectural drafting and design services to her position as building envelope designer. She has specific experience in multiple markets, including large scale retail, education and mixed-use developments. One of Sameth's greatest assets is her ability to quickly adapt to each project's requirements.



DAVID POGREBA (PE, ITC-II)

Project Role: Inspections/Investigations NEXUS Title: Building Envelope Specialist II

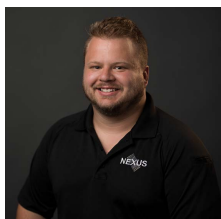
David has 4 years of experience in the building enclosure industry with a special focus on the structural integrity of existing structures. His background working with structural components includes wood, concrete, and steel elements. At NEXUS, David manages field investigations, code reviews, structural analyses, design repairs, and construction administration for projects within residential, retail, medical, commercial, and office type buildings.



BRANDON THOMAS (ITC-I)

Project Role: Inspections/Investigations NEXUS Title: Building Envelope Specialist II

Brandon is a project manager with experience in construction, business development, and project management. His experience has taught him that the most effective project management tool is clear communication. This approach helps him design and execute the best solution for your building envelope needs. Brandon's practical experience in both waterproofing coatings and as a journeyman brick mason gives him a strong background in restoration and remediation.



JONATHAN ROWAN (BIM, ITC-II, FAA-CERTIFIED sUAS PILOT)

Project Role: Inspections/Investigations NEXUS Title: Building Envelope Specialist I

Jonathan is a jack-of-all trades responsible for managing the technical capabilities of NEXUS, including performing field testing and forensic investigations (both non-invasive and invasive). As an FAA-certified sUAS (drone) pilot, Jonathan is able to perform roof investigations and condition assessments of dangerous conditions without needing to be on the facility.

General Project Approach

SOLVE > PROPOSE > EXECUTE

With building envelope and roofing services, we've found that every project is unique - building orientation, materials, environmental factors - all differ and each deserves a creative, inquisitive approach. The process, however, is repeatable and consistent. NEXUS follows a philosophy based upon a foundation of project management best practices, outlined below.



General Project Approach

DEFINED SCOPE

We have found that building envelope services are often greatly valued after they are performed, but not always understood and are underutilized. To assure that our team, the DES PMs, and the owner agencies are on the same page, we have detailed our delivery methods for the services outlined in the RFQ, as well as some additional, common additions. **For brevity, we have summed up each service definition with a “Main Take-away” shown in red below.**

DESIGN CONSULTING

Design consulting relative to the building envelope, which includes all exterior sides of the building enclosure, is specifically targeted toward meeting the Owners’ Project Requirements (OPR). This includes establishing performance criteria for the various elements of the envelope such as expected useful life of roofing materials, higher energy performance of window and wall assemblies, the continuity of the air barrier elements and the general weather resistive qualities of the overall enclosure. Design consulting can involve as little as product recommendations or a brief redline review of the design (independent technical review or ITR) to complete detailing of the building envelope assemblies and energy calculations or hygrothermal (dew point analysis) and thermal performance modeling of the assemblies.

MAIN TAKE-AWAY

NEXUS can lead a project from start to finish. However, typically, this work is done in conjunction with a broader architect-led design team; however, with licensed architects on staff.

FORENSIC INVESTIGATIONS

A core strength of NEXUS is performing comprehensive forensic investigations into building envelope failures, primarily due to water intrusion, and identifying solutions to fix the problem(s). Through our experience in performance testing of structures for both air and water intrusion, we have gained extensive knowledge in identifying potential problems before they become significant issues. In addition to our architectural experience, we use state-of-the-art diagnostic tools, which include infrared (IR) thermographic imaging, moisture probes, digital manometers, blower door test equipment, calibrated water test spray racks and, two (2) aerial drones with IR capabilities, to name just a few of the instruments we use to investigate building performance.

The IR imaging is one of the most powerful tools for an investigation as it enables us to observe and measure thermal anomalies in adjacent materials which, when viewed by an experienced and properly trained operator, allows us to non-invasively identify areas of potential water intrusion or areas of missing/inadequate insulation. The images derived



from this type of investigation are presented side-by-side with visible light digital images to show that same area as we see it and as the IR imager sees it, this also provides clarity to our clients and to contractors performing repairs. To ensure our clients receive the most professional and accurate information available from our IR imaging, we have invested in training two thirds of our field staff with advanced Level II certification through the Infrared Training Center (ITC).

MAIN TAKE-AWAY

Using our years of experience and in-depth knowledge of construction and envelope design, we can evaluate problems comprehensively for issues that may have originated with the initial construction and can perform both non-invasive and invasive investigations.

We currently maintain two drones and two FAA-certified pilots with two additional pilots-in-training. We also have three certified aerial boom lift operators and two Fall Protection and Rescue Authorized Persons for aerial rope work to ensure safe operations while on site.

General Project Approach

DEFINED SCOPE

MITIGATION DESIGN

Mitigation design is often more complicated than the initial building design, because considerations of compatibility between existing and new materials, often limited information on existing conditions, and uncertainty over the extent of work necessary to solve the issue. Our building science and architecture background provides us with the right combination and bridging of skill sets to solve the problem from a scientific perspective and then put that solution into a practical design that can be used in the field by the contractor.

CONTRACT ADMINISTRATION

In a building envelope project, the contract administration is largely a quality control effort focused on delivering the highest performance for the given budget and design. Attending regular construction meetings, performing progress and installation observation and confirming proper quality control protocols, as well as reviewing submittal/substitution requests and change orders for building envelope are all a part of the contract administration services provided.

ON-SITE INSPECTION SERVICES

Our field staff inspect installations of below grade waterproofing, horizontal pedestrian and vehicle deck waterproofing, wall/door/window waterproofing and air barrier installation, flashing and roofing installations. Inspections are coordinated in advance of construction with an outline of anticipated inspections based on the construction schedule. This outline is frequently verified and updated as construction progresses and is presented to the owner and contractor in spreadsheet form for ease of tracking/updating. Pre-installation meetings are included in this schedule and offer an opportunity for NEXUS to explain to the general contractor and their subcontractors what will be inspected throughout the process so they are aware of the expectations early on.

During construction, the inspector always check-in with the contractor when arriving on site and allows for the contractor to follow and observe the inspections. Any deviations identified are documented in a written report issued within five (5) business days of the inspection. Importantly, the inspector reviews all findings with the contractor prior

to departing the site so the contractor is immediately aware of any issues needing to be addressed urgently but also to ensure there is complete understanding prior to report issuance. All deficiencies are logged at the end of each report and this log is updated as issues are rectified throughout construction. This log provides a consistent and on-going checklist for all parties to reference throughout construction and during owner/architect/contractor meetings.

PROJECT CLOSE OUT

Important knowledge and learning is gained in every project, much of which can be transferred to other projects through the close-out process. More than just an archiving and documentation effort, NEXUS believes it is important to



gather and share lessons learned by all the participants in the project. This best practice effort is frequently accomplished in a moderated team meeting environment where all participants are urged to share openly in a professionally direct manner for the benefit of the owner and other participants. We have found this to not only be a successful way to end a project on a positive note but also to gather very important process improvements to be used on future projects, frequently saving time and money.

MAIN TAKE-AWAY

Since a significant amount of our time is spent inspecting and testing designs as an independent third-party consultant, we are highly experienced in quickly and succinctly identifying areas of concern during construction heading off potential long-term problems and costly changes.

MAIN TAKE-AWAY

Firsthand viewing of the construction sequence and installation procedures enables NEXUS to provide feedback to the owner and, more importantly, the contractor, in real time to avoid costly mistakes or out-of-compliance installation.

General Project Approach

DEFINED SCOPE

BUILDING ENVELOPE DESIGN

Building envelope design provided by NEXUS includes reviewing initial design concepts and assembling a Product Matrix of good/better/best options for evaluation by the Architect and Owner, to creation of waterproofing and air barrier details, door and window installation sequences, designing appropriate assemblies, and preparation of envelope energy calculations. Important in the design of the assemblies is an evaluation of the thermal and hygrothermal properties of the design to identify the best-performing assemblies. NEXUS utilizes WUFI and THERM3D software programs to perform this modeling.

Additionally, specifications for building envelope assemblies and establishing testing performance criteria will be provided for inclusion in the overall project specifications, unless NEXUS is the sole consultant, then a complete project manual will be provided.

MAIN TAKE-AWAY

NEXUS can function as the Architect-of-Record (AOR) providing permit preparation and submittal, as well as any required response to comments.

TESTING



Testing is one of our core competencies based on over a decade of air barrier testing for the US Army Corps of Engineers (USACE). We have performed air barrier tests on hundreds of buildings in the State of Washington and in 39 states across the US, as well as in Guam, Japan and Puerto Rico, for both qualitative and quantitative results. We regularly use our infrared thermographic imager and smoke generators to assist in air leakage identification during testing. Additionally, we have performed well over a thousand water

window penetration tests (ASTM E1105 and AAMA 501.2 and 502), pressure test chamber tests (ASTM E331), sealant adhesion tests and pull-off tests for roofing and air barriers (ASTM D4541).

MAIN TAKE-AWAY

We started testing air barriers for USACE more than 5 years before air barrier testing (ASTM E779) was required in the Washington State Energy Code.

BUILDING ENVELOPE COMMISSIONING

Much like the overall building commissioning process, the goal of Building Envelope Commissioning (BECxP) is to ensure a quality design and construction process focused on the Owners' Project Requirements. The identification of the building envelope as a distinct and separate element of the commissioning process is especially important when considering funding for projects that may have specific requirements for the effective useful life of the building and its various elements. This process also recognizes the increasingly important considerations in design of the building envelope when addressing the energy code and sustainability, particularly the Enhanced Commissioning requirements in LEED v.4.

One of the most widely recognized and respected training for Building Envelope Commissioning is through the University of Wisconsin-Madison College of Engineering. Todd Wolf, Managing Principal, completed this course in the top 10% of attendees, gaining designation of both Building Enclosure Commissioning Process Provider (BECxP) and Commissioning Authority + Building Enclosure (CxA+BE) – designations held by only a very few consultants in the Pacific Northwest. These certifications assure the owner the highest quality building their budget will allow.

MAIN TAKE-AWAY

The Building Envelope Commissioning Provider (BECxP) can guide the owner through identifying their requirements relative to the building envelope, performing technical reviews that ensure the requirements are reflected in the envelope design and then establishing an appropriate inspection and testing regime that ensures the construction delivered meets the owners project requirements.

Relevant Experience

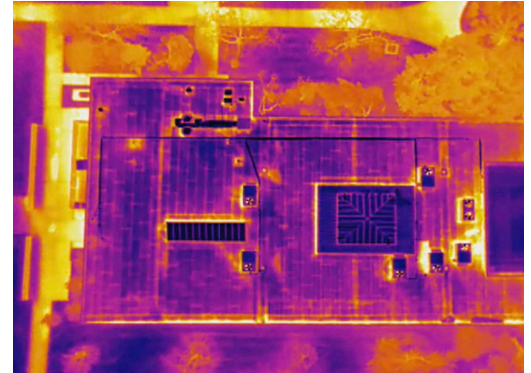
AGENCY EXPERIENCE



Project Information			WA DES Scope							Additional Services		
Project Name	Owner	Prime / Sub	Design Consulting	Investigate	Mitigation Design	Bidding	Contract Admin.	On-site Inspection	Project Close-out	Envelope Cx	Envelope Design	Testing
Highline College Building 26	DES	Sub						X				X
Washington State L&I/WSDA Safety & Health Lab and Training Facility	DES	Sub	X					X		X	X	X
South Puget Sound Community College Building 22 Repair	DES	Prime	X	X	X	X	X	X	X	X	X	X
Centralia College Building Envelope Assessment	DES	Prime	X	X								
Western State Hospital CFS Two Ward Addition	DSHS	Prime						X				X
Western State Hospital Building 28 Mansard Gutter	DSHS	Prime	X									
Western State Hospital Childhood Study and Treatment Center	DSHS	Prime						X				X
Capitol Campus Childcare Center	DES	Sub						X		X		
Washington State Department of Health South Laboratory Addition	DES	Sub								X		
Bates Technical College Medical Health Center	DES	Sub						X		X		X
Pierce College Cascade Building Phase III	DES	Sub						X		X		X
Pierce College North Cascade Building Reclad	DES	Sub	X	X	X			X	X	X	X	
Everett Community College Learning Resources Center	DES	Sub	X							X		
Wenatchee Valley College Wells Hall	DES	Sub								X		
Renton Technical College Building K-3	DES	Sub										X
Grays Harbor College Student Services and Instruction Building	DES	Prime								X	X	X
Western State Hospital CFS Building 28 Roof Replacement	DSHS	Prime	X	X	X	X	X				X	
Health and Wellness Center	SPSCC	Prime										X
Kaiser Permanente Central Campus	KP	Sub	X	X	X		X	X	X	X	X	X
Ballinger Homes	KCHA	Prime	X	X							X	
Microsoft Building 32	MSFT	Sub	X	X	X					X	X	

Relevant Experience

FORENSIC INVESTIGATION, AIR BARRIER DESIGN & TESTING



Centralia College Building Envelope Assessment

CLIENT	LOCATION	DATE COMPLETED	SERVICES
Centralia College	Centralia, WA	2021	Forensic Investigation, Building Envelope Design, Construction Administration

Located in northeast Centralia, the Centralia College Campus contained four buildings experiencing roofing systems reaching the end of their expected life, Department of Enterprise Services reached out to NEXUS for an assessment.

An inspection of the existing conditions was performed by team NEXUS to evaluate any reported building envelope issues and overall conditions. A combination of non-

invasive and invasive investigation methods were utilized to identify areas where failures were occurring. Relying on aerial infrared thermography using a drone outfitted with an IR camera and evaluation of the hygrothermal characteristics of the building, the team was able to identify the root causes of the problems. This enabled the architects to determine an appropriate scope of work and design approach to maximize the available budget for Centralia College.



South Puget Sound Community College Building 22 Repairs

CLIENT	LOCATION	DATE COMPLETED	SERVICES
South Puget Sound College	Olympia, WA	2020	Envelope Design, Investigation Services, Mitigation Design, Bidding, Construction Administration

NEXUS was contracted by the Department of Enterprise Services on behalf of South Puget Sound Community College to determine the cause and extent of severe deterioration in the roof of Building 22. The extent of visible damage caused by water infiltration resulted in the team performing a Level II invasive forensic investigation.

Once the causes were determined, NEXUS designed and detailed the complete re-roof of the portion of the building experiencing water intrusion paying careful attention to the existing detailing and style of the building.

During construction, NEXUS performed regular site inspections and provided Construction Administration services to ensure the repairs were properly carried out per the design intent. We worked closely with the Contractor to address difficult or unexpected conditions.

During the course of this project, the College was so pleased with the results of the assessments and investigations, they engaged directly with NEXUS to perform assessments on two other problem areas that the College had previously been unable to solve.



Western State Hospital CFS Building 28 Roof Replacement

CLIENT	LOCATION	DATE COMPLETED	SERVICES
Dept. of Social and Health Services	Lakewood, WA	2019	Envelope Design, Investigation Services, Mitigation Design, Bidding, Construction Administration

NEXUS was contacted by the Washington State Department of Social and Health Services to provide design and construction phase services for the roof replacement of Western State Hospital's Building 28 in Lakewood, Washington. The roof replacement included removal of existing single ply roofing and rigid insulation, raising existing equipment curbs, installing new building movement joint covers, installing new rigid insulation and new single ply PVC roofing membrane. The 56,000-square-foot roof consists of six different roof levels requiring access coordination for roof tear-off, material removal, and re-installation while maintaining separation for facility clients and roof workforce security.

The scope of NEXUS' work included on-site review of the roof's existing condition and interviewing the Owner's project manager and facility maintenance staff to identify program specific determinants. Security measures were developed to assure re-roof work flow and the security of the contractors staff and materials were maintained. Design documents were developed for permitting/bidding along with construction documents and specifications. Permit submittal and procurement was included within NEXUS' services. The project was publicly bid in December 2018, construction was awarded in March 2019 with construction completion and closeout planned for April 2019. The project bid below the Owner's budget and will be completed within the allotted construction time prescribed.

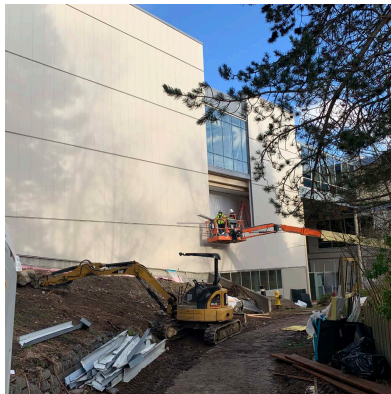
Relevant Experience



HIGHLINE COLLEGE BUILDING 26

Scope: Window Water Testing, Whole Building Air Leakage Testing

Building 26 is a three-story existing building undergoing an extensive renovation and addition. Highline College intended to consolidate the healthcare programs into this newly redeveloped space. NEXUS was brought in by the Department of Enterprise Services to perform building enclosure testing during construction. To ensure the building envelope was performing properly and the building was sufficiently sealed against air infiltration. Air infiltration is a particular concern for this site due to the high wind conditions experienced from the Puget Sound below the site.



PIERCE COLLEGE OLYMPIC NORTH CASCADE BUILDING RECLAD

Scope: Envelope Design, Investigation Services, Mitigation Design, Bidding, Construction Administration

Pierce College had been experiencing water intrusion into the building and visible deficiencies in the cladding on the exterior of the Olympic North Building. NEXUS was engaged through McGranahan Architects as the project management on behalf of the College. Team NEXUS performed investigations, as-built documentation, complete re-cladding and window replacement design, prepared specifications, managed the bidding process, and then performed construction inspections and CA services.



CENTRAL WASHINGTON UNIVERSITY SCIENCE BUILDING II

Scope: Design Technical Review, Air Barrier Consultant/Testing

NEXUS was hired by Central Washington University (CWU) to provide consultation, inspections and testing for the new Science Building II the CWU campus in Ellensburg, Washington. NEXUS' involvement during the construction phase of this project included providing on-site air barrier inspections through multiple site visits at key air barrier installation milestones. The Washington State Energy Code (WSEC) mandates that a whole building air leakage test be performed on the installed air barrier prior to building occupancy.